

Exhibit 15

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

AMERICAN MEDICAL SYSTEMS, INC. and
LASERSCOPE,

Plaintiffs,

v.

BIOLITEC, INC., BIOLITEC AG,
CERAMOPTEC INDUSTRIES, INC.,
CERAMOPTEC GmbH, ANDAOPTEC, LTD.
and FORTEC MEDICAL CORPORATION

Defendants.

Civil Action No. 3:08-CV-30061-MAP

PLAINTIFFS' SUPPLEMENTAL MARKMAN BRIEF

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I. INTRODUCTION

At the *Markman* hearing on May 12, 2009, the Court requested supplemental briefing for the claim term “transmitting surface,” which appears in independent claims 1, 7 and 25 of the Pon 699 patent. This claim term is straight forward, at least until Defendants take turns at it. The following constructions were proposed by the parties at the hearing:

AMS Construction	Defendants’ Construction
surface through which electromagnetic radiation is transmitted from the tip in the desired lateral direction	For configurations having a round core cladding surrounding a round fiber optic core, this limitation is properly construed to mean a portion of the cylindrical outside surface of the core cladding (as construed [by Defendants]) that transmits radiation reflected by the reflecting surface through it in the lateral direction, but not any surface of any non-doped glass or other optically transparent material surrounding the core cladding.

(Ex. 26, AMS *Markman* Presentation, at 13.) As apparent from their proposed construction, Defendants are attempting to avoid a finding of infringement by injecting extraneous limitations, including improper negative limitations, into the plain language of “transmitting surface” in order to narrow the scope of the claims. Moreover, by incorporating their definition of “core cladding,” Defendants inject further limitations into the claims via their definition of “transmitting surface.”

In short, Defendants import the following limitations into independent claims 1, 7 and 25 by their interpretation of “transmitting surface” (and incorporated interpretation of “core cladding”):

- The “transmitting surface” (1) must be a “portion of the cylindrical outside surface of the [round] core cladding” and (2) cannot be “any surface of any non-doped glass or other optically transparent material surrounding the core cladding.”
- In turn, the “core cladding” (3) must be “a doped glass layer surrounding a [round] fiber core” and (4) must have “an index of refraction less than the index of refraction of the fiber core (5) such that the cladding reflects light back into the fiber core as it is transmitted through the fiber core.”

(Doc. No. 105-3, Biolitec's Reply Br., Ex. F, at 2, 4.) Defendants' proposed constructions violate core canons of claim construction and are not supported by the intrinsic or extrinsic evidence. Among other errors, Defendants are importing limitations into the broader independent claims (*e.g.*, claim 1) from narrower dependent claims (*e.g.*, claims 2-4), thereby erasing distinctions between the independent and dependent claims. (*See* Doc. No. 91, AMS's Opening *Markman* Br. at 3, 21-22; Doc. No. 112, AMS's Responsive *Markman* Br. at 11-12 (citing *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003) and *Saunders Group, Inc. v. Comfortrac, Inc.*, 492 F.3d 1326 (Fed. Cir. 2007)); Ex. 26 at 17-18.)

In their supplemental briefs, Defendants make little effort to justify incorporating all of these limitations into "transmitting surface." Instead, Defendants attack AMS's straightforward construction by reciting a litany of red-herring and straw-man arguments. For example, where separate claim language states that the "transmitting surface" is "on the tip of the waveguide" (*e.g.*, claims 1, 7 and 25), AMS does not (and has not) argued otherwise. (Notably, however, that location is expressly described by other claim language and should not be imported into the definition of "transmitting surface.") Nevertheless, Defendants go on and on at great length attacking a straw-man, arguing as though AMS is suggesting (which it is not) that, for these claims, the "transmitting surface" need not be on the tip. Contrary to Defendants' straw man argument, AMS (not Defendants) emphasized in earlier briefs that "the inventions related to the tip of the fiber." (Doc. No. 112, AMS Resp. Br., at 2 (emphasis in original); *see also id.* at 4.)

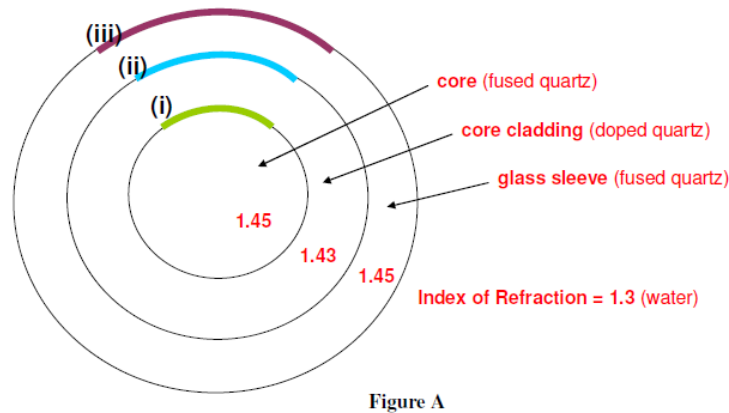
II. DEFENDANTS' PROPOSED CONSTRUCTIONS CONTRADICT THE INTRINSIC EVIDENCE AND VIOLATE CORE CANONS OF CLAIM CONSTRUCTION

Defendants devote the bulk of their briefs to an improper negative limitation, arguing that the transmitting surface allegedly cannot be on a transparent sleeve or cap at the tip of the waveguide. Defendants make little effort to argue for the other extraneous limitations in their

interpretation of “transmitting surface.” As discussed below, Defendants arguments fail for multiple reasons, beginning with the fact that the Pon 699 patent expressly discloses a transmitting surface on a transparent sleeve.

A. Defendants Invite The Court To Construe The Claims In Light Of The Accused Products

In their supplemental briefs, Defendants invite the Court to construe the claims in light of the accused products. Toward this end, ForTec presents “Figure A,” a schematic of the tip of the accused products, purportedly “to facilitate understanding the significance and consequences of the parties’ various proposed constructions of the term ‘transmitting surface.’”



(Reproduced from Doc. No. 118, ForTec’s Suppl. Br., at 2.)

Defendants principally argue that a “transmitting surface” cannot be located on the outer surface of the “glass sleeve” (point (iii)) and only can be located under the “glass sleeve” at point (ii). (Doc. No. 118, ForTec’s Suppl. Br., at 4.) Defendants also contend that the glass sleeve allegedly cannot be part of the “glass cladding” (*e.g.*, claim 25) or “core cladding” (*e.g.*, claim 5).¹

¹ Notably, according to Defendants, the first cladding layer (index of refraction = 1.43) and the second cladding layer (or glass sleeve) (index of refraction = 1.45) are fused together at the tip of the accused products in the manufacturing process. (Doc. No. 118, ForTec’s Suppl. Br., at 2; *see also* Doc. No. 89, Biolitec’s Opening *Markman* Br. at 4.) ForTec’s Figure A is inaccurate to the extent that it suggests that the glass sleeve remains separate from the underlying layer of doped

(*Id.* at 2-4; Doc. No. 117, Biolitec's Suppl. Br., at 6-7.) Defendants' arguments are contrary to the express teachings of the Pon 699 patent.

B. Contrary To Defendants' Contentions, The Pon 699 Patent Expressly Discloses A Transmitting Surface On A Sleeve Or Cap At The Tip

The Pon 699 patent expressly discloses, in the figures and in the written description, a transmitting surface on a transparent sleeve or cap at the tip. In the patent, the figures show two embodiments with a transparent sleeve or cap. These embodiments are shown in Figure 2 and Figure 12 as described in prior briefs.

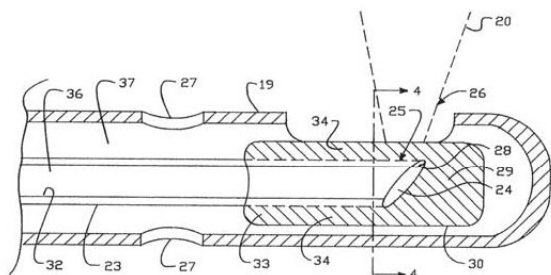


FIG. 2

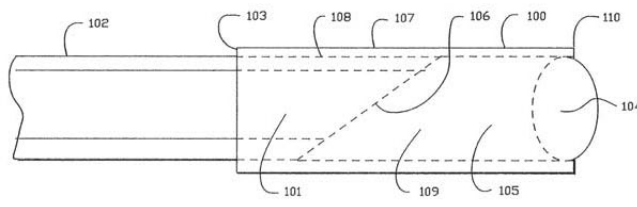


FIG. 12

In the embodiment shown in Figure 2, a transmitting surface is described under the transparent sleeve or cap. In the embodiment shown in Figure 12, a transmitting surface is shown (and described) on the outer surface of the transparent sleeve. Consistent with this disclosure, a transmitting surface could be located under the transparent sleeve or on the outer surface of the transparent sleeve. It is a well-settled canon of claim construction that the “[v]aried use of a disputed term in the written description demonstrates the breadth of the term rather than providing a

quartz. Moreover, the glass sleeve in ForTec's Figure A may consist of two sleeves, one on top of the other, before they are fused together. (*Id.*)

limited definition.” *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 991 (Fed. Cir. 1999) (emphasis added).²

1. Figure 12 And The Associated Written Description Are Not Ambiguous

To avoid Figure 12, Defendants repeatedly argue that it is “ambiguous.” Such statements are plainly wrong. In Figure 12, the transmitting surface (identified as item 107) is clearly shown on the outer surface of the transparent sleeve or tube 100. Moreover, the written description expressly states that a transmitting surface is found on the surface of the transparent sleeve or tube:

electromagnetic radiation . . . passing through the adhesive 108 and the tube 100 and out the transmitting surface 107 on the surface of the tube 100.

(Ex. 1, Pon 699 patent, at 13:34-37 (emphasis added).) In arguing that Figure 12 is “ambiguous,” Defendants never acknowledge that, consistent with the figure, the written description specifically describes a transmitting surface “on the surface of the [transparent] tube.” (*Id.*)

2. Defendants Operate From The Flawed Premise That A Transmitting Surface Excludes The Possibility Of Another Transmitting Surface

Defendants argue that the teachings of Figure 2 and Figure 12 are inconsistent. Defendants’ argument is premised on the flawed assumption that identifying a transmitting surface at one location excludes the possibility of a transmitting surface at any other location. There is no legal or factual basis for such an assumption. Indeed, the fact that the patent claims require one transmitting

² In *Johnson Worldwide*, the patented technology related to a steering control apparatus for small outboard boat motors. The accused infringer argued that the specification and prosecution history of the patent-in-suit showed that the term “heading” was limited to the direction of only a trolling motor. Both the District Court and the Federal Circuit rejected this argument, because the varied uses of the term “heading” in the patent were consistent with a broader construction that encompassed the directions of both the boat and the trolling motor. *Johnson Worldwide*, 175 F.3d at 990-91 (“That the term ‘heading’ is used at various points in the written description to refer to both the direction of the trolling motor and the boat is simply not ‘a special and particular definition created by the applicant,’ and is thus an insufficient reason to limit the scope of the [claim] term.”) (citation omitted).

surface does not exclude additional transmitting surfaces. (*See* Doc. No. 112 at 13 n.4 (citing *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 945 (Fed. Cir. 1990) (“The addition of features does not avoid infringement, if all elements of the patent claims have been adopted.”), *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1057 (Fed. Cir. 1988) (“Adding features to an accused device will not result in noninfringement if all the limitations in the claims, or equivalents thereof, are present in the accused device.”), and *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1282-83 (Fed. Cir. 1986)).)

Consider, for example, Figure 2 where a transmitting surface 25 is identified under the transparent cap 30. Notably, the written description explains that, after passing through transmitting surface 25, the electromagnetic radiation also passes through the transparent cap 30 following “light energy path 20.”

Electromagnetic radiation, internally reflected by the reflecting surface 25, passes through the particular area 28 of the transmitting surface 25, the adhesive 34, the cap 30, and then through the cut out 26 as shown by light energy path 20.

(Ex. 1, Pon 699 patent, at 5:66-6:2 (emphasis added).)

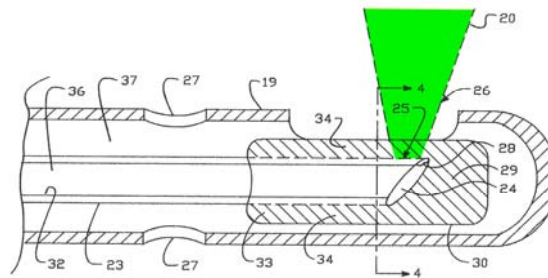


FIG.2

(*Id.* at Fig. 2.) Applying common sense, where the light energy following path 20 (green highlighting) is transmitted through the transparent cap 30, the outer surface of the cap also can be described as a transmitting surface. This understanding is borne out by Figure 12 (and the written

description associated with Figure 12) where a transmitting surface is expressly identified, both in the drawing and in the written description, on the surface of the transparent tube as discussed above.

3. As Demonstrated By Claim 18, The Term “Transmitting Surface” Is Not Limited To Only One Location

To avoid Figure 12, Defendants also argue that it is inconsistent with claim 18, which recites a tube with a plug “enclosing . . . the transmitting surface.” There are at least two fundamental flaws in Defendants’ argument. First, claim 18 (like all patent claims) must be interpreted in light of the patent specification as whole, not just Figure 12 as Defendants suggest. *See Electro Sci. Indus. v. Dynamic Details, Inc.*, 307 F.3d 1343, 1349 (Fed. Cir. 2002) (“In the context of the entire specification, the depiction of separate workpieces in Figure 6 does not limit the claim language.”) Second, even assuming, *arguendo*, that claim 18 is directed exclusively to Figure 12, there is no reason to conclude that the embodiment of Figure 12 can have only one transmitting surface, for reasons discussed above. To the contrary, to the extent that the written description and drawings identify one transmitting surface on the outer surface of the tube, on the one hand, and claim 18 identifies a second transmitting surface enclosed by the tube, on the other hand, the appropriate conclusion is that both locations can have a transmitting surface.

Notably, Defendants completely disregard dependent claim 19, in which the claimed “cap” is recited as enclosing the reflecting surface, but not the transmitting surface. (See Ex. 1 at 16:48-52.) In other words, claim 19, which depends from claim 7 just like claim 18, does not specify a location on the tip for the transmitting surface and encompasses embodiments where the transmitting surface is located on the surface of the “cap.”

As discussed above, the “[v]aried use of a disputed term in the written description demonstrates the breadth of the term rather than providing a limited definition.” *Johnson Worldwide*, 175 F.3d at 991 (emphasis added). In other words, if claim 18 identifies a transmitting

surface at a different location than the written description, this is not evidence of ambiguity or inconsistency, but rather evidence of the breadth of the claim term “transmitting surface.”³

Defendants contend that “transmitting surface” must be limited to one specific location, the surface of the core cladding. To the contrary, assuming, *arguendo*, that “transmitting surface” is limited to a particular location, then the location should be the surface through which the radiation exits the apparatus or probe. This location is consistent with the specification, for the reasons stated in AMS’s Opening *Markman* Brief. (See Doc. No. 91 at 11-12.) Indeed, for the “[e]xperimental results” that achieved transmission of “greater than 90%” of the energy, the optical power meter was placed outside a fused quartz cap to measure the side firing beam that was transmitted “in the intended direction.” (See Ex. 1 at 11:41-12:10.) Moreover, Defendants cannot explain why the “transmitting surface” must be located on the surface of the “core cladding” for claims that do not even recite “core cladding.” (See Doc. No. 112, Plaintiffs’ Responsive *Markman* Br. at 11.)

³ Defendants rely, erroneously, on *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379 (Fed. Cir. 2008) to allege that the embodiment shown in Figure 12 should be excluded from all claims. *Helmsderfer* is inapposite, and distinguished on at least three grounds. First, the disputed claim term in *Helmsderfer* (“partially hidden from view”) was not used anywhere in the specification of the patent-in-suit. See 527 F.3d at 1382. In contrast, “transmitting surface” is used repeatedly in the specification of the Pon 699 patent. Second, the embodiments at issue in *Helmsderfer* were excluded from only the claims at issue on appeal. Other claims in the patent could still have encompassed these excluded embodiments. *Id.* at 1383. In contrast, Defendants’ construction of “transmitting surface” would exclude the embodiment shown in Figure 12 from all claims, and convert Figure 12 and its accompanying language into “errors” in the patent. See *Rambus, Inc. v. Hynix Semiconductor, Inc.*, No. 05-00334, 2008 U.S. Dist. LEXIS 56980, at *32 (N.D. Cal. July 25, 2008) (“[*Helmsderfer*] pointed out the importance of considering whether or not other claims in a patent might read on the allegedly excluded embodiment, and in affirming a claim construction that excluded an embodiment, the [Federal Circuit] pointed out that certain other claims might embrace it.”) (Ex. 27). Finally, *Helmsderfer* cautioned courts against adopting constructions that exclude disclosed embodiments, especially when the disputed claim term is used in a varied manner in the specification. See *Helmsderfer*, 527 F.3d at 1383 (citing, *inter alia*, *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (a construction that excludes preferred embodiments is “rarely, if ever, correct and would require highly persuasive evidentiary support”) and *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305 (Fed. Cir. 2007) (rejecting proposed claim interpretation that would exclude examples disclosed in the specification)); (see also Doc. No. 112, Plaintiffs’ Responsive *Markman* Br. at 14.)

4. Nothing In The Pon 699 Patent Teaches That The Tip Cannot Include A Transparent Sleeve Or Cap

Defendants also argue that, because the “transmitting surface” is on the tip of the waveguide, it “cannot be on any transparent cap, tube and/or sleeve secured to the tip of the waveguide.” (Doc. 117 at 9.) This argument also is fundamentally flawed for at least three reasons.

First, as discussed above, Figure 12 and the associated written description expressly disclose a transmitting surface on a transparent tube or sleeve. Defendants invite legal error when they suggest that the Court should disregard this disclosure, which directly refutes Defendants’ arguments.

Second, in view of the patent as a whole, it is clear that multiple surfaces through which the electromagnetic radiation (or light energy) is transmitted in the desired lateral direction can be transmitting surfaces, as discussed in detail above. *See Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1367 (Fed. Cir. 2005) (“[One must] read the claim term not only in the context of a particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”).

Third, as expressly described in the patent, the “tip” can include additional components beyond those found elsewhere in the fiber (or waveguide). The specification specifically states:

While a fiber optic tip constructed in accordance with the present invention can be formed into the distal end of a waveguide, the tip of the present invention can be a separate component that is coupled to the distal end of a waveguide using transparent adhesive index matched to the waveguide.

(Ex. 1, Pon 699 patent, at 12:49-56.)

Defendants argue that concept of additional components at the tip is limited to Figures 11 and 11a. (Doc. 117 at 9.) Defendants are wrong. The above-quoted statement is general in nature. It does not use the call-out numbers associated with Figures 11 and 11a (or any other figures). It is not limited to any specific figures. Moreover, the specification describes the same concept in

connection with other embodiments. For instance, in connection with the embodiments shown in Figures 1-4 and 6, 6a and 6b, the specification states:

The fiber tip 51 can be formed in the distal end of an optical fiber 23 as a unitary component or coupled to a distal end of another optical fiber serving as a waveguide using a transparent adhesive or otherwise.

(Ex. 1, Pon 699 patent, at 8:52-55.) The embodiments referenced in this statement include the embodiment shown in Figure 2, which includes a transparent cap. Likewise, in connection with the embodiments shown in Figures 7 and 7a, the specification states:

The tip 61 can be formed into the distal end of an optical fiber or coupled to the distal end of the optical fiber with a transparent adhesive index matched with the waveguide and the tip.

(*Id.* at 9:35-38.) In short, contrary to Defendants' argument, the concept of forming the tip with additional components is not limited to Figures 11 and 11a.

Moreover, the specification expressly states:

The . . . description of preferred embodiments of the present invention has been provided for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise forms disclosed. Obviously, many modifications and variations will be apparent to practitioners skilled in this art.

(*Id.* at 14:33-39.) Despite this disclosure, Defendants argue that the tip must be formed either exclusively from the same components as the rest of the fiber or exclusively from separate components and therefore the tip cannot include "any transparent cap, tube and/or sleeve." (Doc. 117 at 9.) Such a strained, narrow reading of the patent and its claims is not warranted, particularly in view of the breadth of the patent disclosure. Nothing in the Pon 699 patent teaches that the tip cannot include a transparent sleeve or cap.

C. The Prosecution History Does Not Negate The Express Disclosure Of The Pon 699 Patent

As discussed above, the Pon 699 patent expressly discloses a transmitting surface on a transparent tube or sleeve at the tip. Defendants cropped a few quotes from the prosecution history

and cobble them together in attempt to negate the express disclosure of the patent. (Doc. 117 at 2-3.) Contrary to Defendants' contentions, nothing in the prosecution history is inconsistent with the concept of a transmitting surface on a transparent sleeve or cap at the tip. In particular, throughout the entire prosecution history, the patent applicant never argued that a transmitting surface on a sleeve or cap was not a transmitting surface on the tip. In short, the prosecution history does not negate the express disclosure, in the Pon 699 patent, of a transmitting surface on a sleeve or cap. *See Sorensen v. ITC*, 427 F.3d 1375, 1380-81 (Fed. Cir. 2007) (Absent "a clear and unambiguous disavowal of the broad scope of the claim language[], the prosecution history does not disavow the broad scope of the claim language and specification[.]")

D. "Transmitted From The Tip In The Desired Lateral Direction"

AMS's proposed construction of "transmitting surface" is a "surface through which electromagnetic radiation *is transmitted from the tip in the desired lateral direction.*" In view of Defendants' supplemental briefs, they apparently do not take issue with the portion stating that "electromagnetic radiation is transmitted from the tip in the desired lateral direction." Indeed, Defendants' proposed construction includes a similar phrase: "transmits radiation . . . through it in the lateral direction." (Doc. 105-3 at 1.)

To the extent that Defendants argue that AMS's proposed construction of "transmitting surface" is unbounded, this clause is significant. It is consistent with the purpose of the invention as described in the Pon 699 patent. (*See, e.g.*, Ex. 1, Pon 699 patent, at 2:23-24 ("output energy is directed in the desired lateral direction"); *id.* at 11:39-40 ("laser energy transmitted through the fiber can be laterally directed by the probe in the direction desired").)

For example, in the Pon 699 patent, the specification expressly distinguishes the Abe 047 patent because "a significant portion of the laser energy or beam does not leave the fiber in the desired direction due to internal reflection of the beam off interfaces between the fiber and the

surrounding environment.” (*Id.* at 1:46-50.) Accordingly, if a significant portion of the electromagnetic radiation passing through a surface does not ultimately exit the probe in the desired direction, then that surface would not be considered a “transmitting surface.”

In other words, to be a “transmitting surface,” a surface should be in a “light energy path,” such as path 20 in Figure 2, whereby a significant portion of the laser energy exits in the desired direction. For this reason, AMS’s construction provides that a “transmitting surface” is a “surface through which electromagnetic radiation is transmitted from the tip in the desired lateral direction.”

E. Defendants’ “Cladding” Arguments Are Misplaced

As discussed above, Defendants incorporate their definition of “core cladding” into their definition of “transmitting surface,” thereby injecting additional extraneous limitations into the patent claims. Previously, Defendants argued that the claim terms “glass cladding” and “core cladding” required “doped glass,” among other limitations. (Doc. 105-3 at 4.) In their supplemental briefs, Defendants make little effort to defend this extraneous limitation.

Instead, Defendants now apparently contend that the terms “glass cladding” and “core cladding” are limited to only “one layer of the ‘cladding.’” (Doc. 117 at 6.) By this new extraneous limitation, Defendants apparently seek to distinguish the accused products. For the accused products, Defendants contend that the cladding at the tip consists of two or three layers before they are fused together in the manufacturing process. (*See* Doc. No. 89, Biolitec’s Opening *Markman* Br. at 4-5.)

1. The Pon 699 Patent Does Not Teach That The Core Cladding Is Limited To Only One Index Of Refraction

Defendants’ “cladding” arguments are misplaced. In the Pon 699 patent, the specification explains that, for certain embodiments, plastic layers are removed at the tip:

The “cladding” of a typical fiber optic includes additional hard plastic cladding layer (not shown) which lies over the core cladding layer 81. The additional hard plastic

cladding layer is used in case the fiber is bent so that the core cladding layer 81 suffers leakage due to increased incidence angles in the bent portion. Over the hard plastic cladding, a nylon jacket is applied to protect the hard plastic cladding layer are stripped back away from the tip in this embodiment.

(Ex. 1, Pon 699 patent, at 10:48-58; *see also id.* at 4:59-60 (“Any plastic cladding near the distal end of the fiber optic is removed . . .”).)

Contrary to Defendants’ contentions, nothing in the above quote excludes a core cladding that consists of multiple materials or multiple indices of refraction. With the prior briefing, AMS presented evidence that a person skilled in this art at the time of the invention would know that the core cladding could have multiple materials or multiple indices of refraction. (*See* Ex. 7 at 114-15; Doc. No. 91, AMS’s Opening *Markman* Br. at 16.) Defendants have not disputed that evidence or presented any contrary evidence.

Defendants’ arguments from the prosecution history are similarly misplaced. (Doc. No. 117 at 6.) In particular, Defendants rely on discussion from the prosecution history relating to cladding layers that are removed at the tip of a prior art reference. (Ex. 6 at AB 000097-98; Ex. 28, Translation of Japanese Kokai Patent Application No. 61-219904, at 13.) Nothing in the prosecution history contradicts the evidence presented by AMS, which establishes that a person skilled in the art would understand that the core cladding could consist of multiple materials with multiple indices of refraction.

Defendants continue to ignore the actual language of the claims. Certain claims recite, for example, “cladding comprising a transmissive material.” (Ex. 1 at 15:15 (claim 5).) The parties agree that “comprising” is well-understood in patent law to mean including but not limited to the elements of the claim. It is an open-ended term. The term “a,” as used in patent claims, is typically a term of art used to introduce a new element, and means “one or more.” *See Baldwin Graphics Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342-43 (Fed. Cir. 2008). Thus, the claim language

explicitly permits the cladding to include one material, or more than one material (and to have more than one index of refraction, such as graded-index cladding). Other claims reciting a material for the “cladding” are similarly open-ended. (*See, e.g.*, Ex. 1 at 15:7-9, 15:49-51, 17:24-26, 18:43-45 (claims 3, 6, 24, 34: “cladding comprises doped fused quartz”).) Still other claims do not limit the “cladding” to a single material at the tip, but do require that, whatever materials are used, they all be “glass.” (*See id.* at 17:29 (claim 25).) Defendants disregard this language and propose limiting all cladding, including the claimed “glass cladding,” to “doped glass cladding.”

2. “Glass Cladding” And “Core Cladding” Are Not Synonymous

Defendants argue at great length that “the ‘core cladding’ limitation must be construed either synonymously with, or more narrow than, the ‘glass cladding’ limitation.” (Doc. 117 at 10-13.) Again, Defendants contradict the claim language. For instance, independent claim 25 recites “a glass cladding,” and dependent claims 26, 33 and 34 separately recite “a core cladding.” (Ex. 1, Pon 699 patent, at 17:29, 18:2, 18:36, 18:43.) When the indefinite article “a” is used to introduce an element in the claim, it indicates that the element does not have an antecedent basis (here, it means that “a core cladding” does not refer back to the glass cladding introduced in independent claim 25). *Baxter Healthcare Corp. v. Fresenius Med. Care Holdings, Inc.*, No. C 07-1359 PJH, 2009 U.S. Dist. LEXIS 14842, at *35-36 (N.D. Cal. Feb. 10, 2009) (Ex. 23).

Defendants also mischaracterized the prosecution history. For instance, Defendants point to statements in an information disclosure statement as (1) allegedly showing that no “distinction [was drawn] between the terms ‘core cladding’ and ‘glass cladding,’” and (2) allegedly “reinforc[ing] the fact that the intrinsic record does not draw any distinction between the terms ‘glass cladding’ and ‘core cladding’ but rather uses the terms synonymously.” (Doc. No. 117 at 12.) But the statements on which Defendants rely were made eleven months before “glass cladding” was added

to the claims. (*Compare* Plaintiffs’ Ex. 6 at AB 000097-98 (October 1993 statements) *with* Ex. 6 at AB 000116-18 (September 1994 amendment adding “glass cladding” to claim 26).)

Moreover, Defendants argue, erroneously, that “the terms ‘core cladding’ and ‘glass cladding’ [were used] synonymously to argue over the prior art.” (Doc. No. 117 at 11.) But during the prosecution history, issued claim 25 (application claim 26) was specifically amended to include the term “glass cladding.” (Ex. 6 at AB 000116.) In the accompanying “Remarks,” the applicant stated:

Payne et al. fails to teach or suggest that the glass cladding extends to the end of the waveguide structure to the reflecting surface. Payne et al. does not teach or suggest that the fiber core and the core cladding extend to the end of the fiber.

(Ex. 6 at AB 000117.) If “glass cladding” meant the same thing as “core cladding,” the second sentence above would have been redundant. Notably, Defendants quoted only the second sentence above. (Doc. No. 117 at 11-12.) Defendants also do not quote the later, separate paragraph addressing claim 26 only, which states that “[c]laim 26 has also been amended to include clarifying language that the waveguide has a tip with a glass cladding that extends to a distal end of the tip. Again, Payne et al. teaches away from this extension of the glass cladding.” (*Id.* at AB 000118.) Defendants’ arguments regarding the prosecution history should be rejected.

3. Claim Differentiation Does Not Rescue Defendants’ Flawed Constructions

Defendants’ reliance on the doctrine of claim differentiation is flawed. Defendants argue that AMS’s construction of “cladding” would render dependent claims 26 and 33 broader than independent claim 25. (*See* Doc. No. 117 at 10-11 (citing two cases for the first time, *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1242 (Fed. Cir. 2003) and *Schoenhaus v. Genesco, Inc.*, 440 F.3d 1354 (Fed. Cir. 2006)).) But this conclusory argument is erroneous and, in any event, disregards the additional limitations added by claims 26 and 33. (*See* Ex. 1 at 17:44-18:11, 18:33-

42.) Moreover, when claim differentiation is properly applied, the Biolitec Defendants' construction of "transmitting surface" must be rejected. (*See* Doc. No. 112, Plaintiffs' Responsive *Markman* Br. at 11-12; Ex. 26, AMS's *Markman* Presentation at 18.)

4. Contrary To Defendants' Contentions, The Terms "Glass Cladding" And "Core Cladding" Should Not Be Construed To Exclude Fused Materials

In any event, even assuming, *arguendo*, that "glass cladding" and "core cladding" are synonymous, neither term should be limited to "doped glass" or limited to a single index of refraction or limited to a single material. Nothing in the intrinsic evidence supports such a narrow construction, as discussed above. Furthermore, the extrinsic evidence established that persons skilled in the art would understand "core cladding" to encompass a variety of materials and indices of refraction. (*See* Ex. 7 at 114, 115.)

III. CONCLUSION

AMS's proposed constructions are supported by the intrinsic and extrinsic evidence and are consistent with the core canons of claim construction. In contrast, Defendants' constructions contradict the express teaching of Pon 699 patent and violate fundamental claim construction principles. Contrary to Defendants' contentions, nothing in the Pon 699 patent teaches that the "transmitting surface" cannot be on the surface of a transparent sleeve, tube or cap. Indeed, the patent expressly discloses just such an embodiment. Likewise, nothing in the Pon 699 patent teaches that the "core cladding" or "glass cladding" is necessarily limited to a single material, or a single index of refraction. AMS's proposed constructions should be adopted.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the following document(s):

- Plaintiffs' Supplemental *Markman* Brief; and
- Declaration of Scott P. McBride with Exhibits 26-28

have been filed through the ECF system and will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non registered participants via Federal Express on June 2, 2009.

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